PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
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PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing (*day/month/year*)	19 NOV 2007
Applicant's or agent's file reference 16820.P307	FOR FURTHER ACTION See paragraph 2 below

International application No.	International filing date (*day/month/year*)	Priority date (*day/month/year*)
PCT/US05/28793	12 August 2005 (12.08.2005)	13 August 2004 (13.08.2004)

International Patent Classification (IPC) or both national classification and IPC

IPC: G06F 17/50(2006.01)
USPC: 716/17

Applicant

CYPRESS SEMICONDUCTOR CORPORATION

1. This opinion contains indications relating to the following items:

- ☒ Box No. I — Basis of the opinion
- ☐ Box No. II — Priority
- ☐ Box No. III — Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV — Lack of unity of invention
- ☒ Box No. V — Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI — Certain documents cited
- ☒ Box No. VII — Certain defects in the international application
- ☒ Box No. VIII — Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis(b)* that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US	Date of completion of this opinion	Authorized officer
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	11 October 2007 (11.10.2007)	Jack Chiang Telephone No. 571-272-2800

Form PCT/ISA/237 (cover sheet) (April 2005)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US05/28793

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

☒ the international application in the language in which it was filed

☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ on paper

☐ in electronic form

c. time of filing/furnishing

☐ contained in the international application as filed.

☐ filed together with the international application in electronic form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

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Box No. V Reasoned statement under Rule 43 *bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	6,7,14,15,21 and 22	YES
	Claims	1-5,8-13 and 16-20	NO
Inventive step (IS)	Claims	1-22	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims	NONE	NO

2. Citations and explanations:

Please See Continuation Sheet

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US05/28793

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

The drawings are objected to under PCT Rule 66.2(a)(iii) as containing the following defect(s) in the form or content thereof: in figure 3, "??" should be deleted from element 312; in figure 4, reference character "404" has been used to designate two different elements; in figure 4, reference characters "404" and "406" have both been used to designate the same element; in figure 4, elements "402" and "406" are mentioned in the specification at [0035] but are not found in the drawing.

The description is objected to as containing the following defect(s) under PCT Rule 66.2(a)(iii) in the form or contents thereof: "308" [line 2 of paragraph 0030] should be changed to --208-- as per figure 2.

Claims 2, 10 are objected to under PCT Rule 66.2(a)(iii) as containing the following defect(s) in the form or contents thereof: the term "the selection" should be changed to --the selectable list-- to clarify antecedent basis.

?

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the questions whether the claims are fully supported by the description, are made:

Claims 3, 5-7, 10-17, 20, 22 are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because the claims are indefinite for the following reason(s): as per claims 3 and 11, there is no antecedent basis for "the resource requirements of the one or more functions of the system level solution", thus rendering the claims indefinite; as per claims 5-7, 13, 20, 22, there is no antecedent basis for "after each selection of a high level device", thus rendering the claims indefinite; as per claims 10-16, the grammar is confusing thus rendering the claims indefinite.

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

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Supplemental Box
In case the space in any of the preceding boxes is not sufficient.

V. 2. Citations and Explanations:

Claims 1-5, 8-13, 16-20 lack novelty under PCT Article 33(2) as being anticipated by Bartz et al. [U.S. Patent #6,701,508 B1].

Claims 6,7 14,15 21-22 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest validating a current state of the system level solution.

Claims 1-22 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

As per claim 1/18 a method, comprising: automatically providing a user interface comprising a selectable list of one or more processing devices based on a system level solution [column 5, lines 5-20]; automatically generating an embedded programmable system solution from the system level solution and a processing device selected from the selectable list of one or more processing devices [column 5, lines 36-49]; and automatically programming the processing device according to the embedded programmable system solution [column 5, lines 57-58]. As per claim 2, wherein prior to the automatically providing, determining the selection of one or more processing devices by matching resource requirements of one or more functions of the system level solution to one or more base projects associated with the one or more processing devices [column 5, lines 52-54]. As per claim 3, further comprising automatically generating one or more base projects associated with the one or more processing devices based upon the resource requirements of the one or more functions of the system level solution and physical parameters associated with the one or more processing devices [column 5, lines 52-54]. As per claim 4/19, wherein prior to the automatically generating, providing the user interface with a selectable list of a plurality of high level devices to design the system level solution [column 5, line 59-column 6, line 11]. As per claim 5/20, further comprising updating the selectable list of the plurality of high level devices and the selectable list of the one or more processing devices after each selection of a high level device from the plurality of high level devices [column 7, lines 28-42; column 8, lines 25-26]. As per claim 8, wherein the selectable list of one or more processing devices is comprised of at least one of a programmable logic device, a field programmable gate array, a micro-controller, a microprocessor-based device, or a circuit comprising a processing device [column 5, line 25].
As per claim 9, a system, comprising: a processing device maker engine to provide a user interface comprising a selectable list of one or more processing devices based on a system level solution [column 5, lines 5-20]; and a hardware designer engine to receive the system level solution from the processing device maker and to generate an embedded programmable system solution from the system level solution and a processing device selected from the one or more processing devices, and to program the processing device according to the embedded programmable system solution [column 5, lines 36-49, 57-58]. As per claim 10, wherein to provide the user interface, the

Supplemental Box
In case the space in any of the preceding boxes is not sufficient.

processing device maker engine to determine the selection of one or more processing devices by matching resource requirements of one or more functions of the system level solution to one or more base projects associated with the one or more processing devices [column 5, lines 52-54]. As per claim 11, wherein the processing device maker engine further to generate one or more base projects associated with the one or more processing devices based upon the resource requirements of the one or more functions of the system level solution and physical parameters associated with the one or more processing devices [column 5, lines 52-54]. As per claim 12, wherein the processing device maker engine to provide the user interface with a selectable list of a plurality of high level devices to design the system level solution [column 5, line 59-column 6, line 11]. As per claim 13, wherein the processing device maker engine to update the selectable list of the plurality of high level devices and the selectable list of the one or more processing devices after each selection of a high level device from the plurality of high level devices [column 7, lines 28-42; column 8, lines 25-26]. As per claim 16, wherein the processing device maker engine further to save a first file comprising the system level solution, to delete one or more lower level files associated with the embedded programmable system, and to generate a schematic of the programmed selected processing device, wherein the schematic includes at least one of functional pins, input output devices, or interfacing circuitry [column 5, lines 26-27; column 6, line 36; figures 7, 8A, 8B]. As per claim 17, wherein the selectable list of one or more processing devices is comprised of at least one of a programmable logic device, a field programmable gate array, a micro-controller, a microprocessor-based device, or a circuit comprising a processing device [column 5, line 25].